REMARKS/ARGUMENTS

In the specification, at pages 1-8, the matter has been deleted and added for enabling a clear and concise language.

In the Abstract of the disclosure, at page 13, the matter has been deleted and added for enabling a clear and concise language.

Claim 9 has been added in this application.

Respectfully submitted,

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Marked-Up Version

TITLE: HAND AND FOOT EXERCISER

BACKGROUND OF THE INVENTION

1) Field of the invention

The present invention relates to a mechanical apparatus for ~~make~~ making different exercises on the ground and, more particularly, to an apparatus ~~made up of~~ comprising a ~~rigid frame~~ base structure covered with a motionless cushion ~~on which~~ for supporting the ~~user~~ user's body ~~can be installed comfortably when he makes different exercises on the ground, a vertical bar curved at its superior end provided with an adjustable rotary part at different positions, and a belt allowing to join the wrist or the ankle from the user to a steel wire~~ while its wrist or ankle is engaged to a belt attached to a steel cable which is arranged so as to be pulled in the desired direction.

2) Description of the related art

It has been recognized as desirable to provide a mechanical apparatus for exercising the muscles in general.

A search of prior art records has unveiled the following patents:

1. ~~No~~ US 2,436,987 issued in 1948 to Bailleaux; and

2. ~~No~~ US 3,117,782 issued in 1964 to Johnston.

The patent issued in 1964 to Johnston is probably the most relevant. As can be seen, the problem encountered with use of the physical exercise apparatus to Johnston is that, the tension of the steel wires is not adjustable when the user makes different exercises on the ground, and the longitudinal structure is not adjustable at different positions.

To overcome the above-mentioned problem, in accordance with the teachings of the invention, there is disclosed hand and foot exerciser, which is relatively simple and economical to manufacture.

SUMMARY OF THE INVENTION

In accordance with the present invention, the mechanical apparatus ~~is made up of~~ comprises a ~~rigid frame~~ base structure covered with a motionless cushion ~~on which~~ for supporting the ~~user~~ user's body ~~can be installed comfortably when he makes different exercises on the ground, a vertical bar curved at its superior end provided with an adjustable rotary part at different positions, and a belt allowing to join the wrist or the ankle from the user to a steel wire~~ while its wrist or ankle is engaged to a belt attached to a steel cable passing around a small pulley being engaged into an adjustable rotary part turning freely in all directions and being connected at a curved end of a

vertical bar mounted of each side of one small pulley and blocked thereby a metal pin through a hole formed thereon a part member fixed to the base structure of the apparatus for adjusting the vertical bar according to the desired position.

Further, the steel cable extends inside the vertical bar so as to be able to turn around two small pulleys being mounted at the base structure of the apparatus and of a main large pulley fixed at a diagonal bar, and to be finally attached to a first end of an arm member and which the second end is fixed at the base structure of the apparatus.

A spiral spring is connected approximately in middle of the arm member and welded to a rod connected to part member which may be moved along the perforated body member welded to the base structure and to be blocked through a hole thereby a metal pin for adjusting the tension of the spring.

BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWINGS

The foregoing and other objects, advantages and characterizing features of the present invention will become clearly apparent from the ensuing detailed description of illustrative embodiments thereof, taken together with the accompanying drawings wherein like reference numerals denote like parts in the different figures:

Figure 1 is a perspective view of the mechanical apparatus ~~allowing to~~ for ~~make~~ making different exercises on the ground.

Figure 2 is a ~~top plan~~ profile view of the vertical bar ~~curved at its superior end made up of~~ having an adjustable rotary part provided with a small pulley by which ~~the~~ a steel wire is pulled ~~down without friction~~ in ~~all~~ the desired ~~directions~~ direction .

Figure 3 is a ~~plan~~ profile view ~~of the adjustment of~~ showing the vertical bar fixed at ~~the~~ a desired position.

Figure 4 is a top view of the ~~mechanical system~~ base structure and the assembly of the components from the mechanical apparatus.

Figure 5 is a top view of the ~~mechanical system~~ base structure from the apparatus showing the adjustment of the spring connected to an arm member ~~of the figure 4~~ in a different position ~~such that shown in figure 4~~.

Figure 6 is a ~~plan~~ profile view of ~~mechanical system allowing the adjustment of the perforated frame in semi-circle to the~~ the mechanism allowing to adjust the tension of the spring at a desired position.

Figure 7 is a ~~perspective~~ profile view of the main large pulley fixed at ~~the~~ a ~~transversal~~ diagonal bar connected to the ~~frame~~ base structure from the mechanical apparatus.

Figure 8 is a ~~perspective~~ profile view of the main large pulley allowing to the steel wire to turn two times around of the pulley ~~in~~ by giving an effect of pulley's arc.

Figures 9a, b, c and d, are the side elevational views ~~of the mechanical apparatus showing the user and the vertical bar making different exercises on the ground in different positions~~ illustrating the operation of the present invention by a user .

DETAILED DESCRIPTION OF THE INVENTION

~~Referring more specifically to figs. 1 through 3, the present invention is a mechanical apparatus made up of a rigid frame (10) covered with a motionless cushion (16) on which the user can be installed comfortably when he makes different exercises on the ground ; a vertical bar (11) curved at its superior end made up of an adjustable rotary part (12) at different positions is provided with a small pulley (13) allowing to a steel wire (5) to pass without friction inside of the pulley (13) anchored into the rotary part (12) turning freely in all directions, which allows to a steel wire (5) to be pulled down in several directions; and a belt (17) allowing to join the wrist or the ankle from the user to a steel wire (5). The bottom end of the vertical bar (11) comprises a part provided with small holes (19) fixed at the~~

~~frame (10) from the mechanical apparatus, allow to change the adjustment of the vertical bar (11) at the desired position in blocking the vertical bar (11) with a metal pin (14), which the metal pin (14) is inserted into a small hole of the part provided with small holes (19).~~

~~Referring to figs. 4 through 6, a movable part (8) is fixed at the perforated frame (3) in semi-circle from the mechanical apparatus by a metal pin (9) allowing the adjustment of the spring (6) so as to make a rotation parallel to the floor, and joined to the stem (7) provided with legs welded at the spring (6) fixed at the bar (1) anchored to the frame (10) from the mechanical apparatus joining the steel wire (5) passing inside of the main large pulley (4) fixed at the transversal bar (18) joined to the frame (10) from the mechanical apparatus. Referring to figs. 4, 5, 7 and 8, the steel wire (5) fixed at the bar (1) anchored to the frame (10) from the mechanical apparatus makes two turns around of the main large pulley (4) fixed at the transversal bar (18) joined to the frame (10) from the mechanical apparatus in giving an effect of pulley's arc, which the steel wire (5) passes inside of two small pulleys (2) and of the vertical bar (11). Referring to figs. 9a, b, c and d, the belt (17) allows to join the ankle from the user to steel wire (5) fixed at the vertical bar (11) shown in different positions.~~

Referring more specifically to figs. 1 to 3, the present invention is a mechanical apparatus having a base structure (10) covered with a motionless cushion (16) for supporting the user's body while its wrist or ankle is engaged to a belt (17) attached to a steel cable (5) passing around a small pulley (13) being engaged into an adjustable rotary part (12) turning freely in all directions and being connected at a curved end of a vertical bar (11) mounted of each side of one small pulley (2) and blocked thereby a metal pin (14) through a hole formed thereon a part member (19) fixed to the base structure (10) of the apparatus for adjusting the vertical bar (11) according to the desired position.

As illustrated to figs. 4 to 8, the steel cable (5) extends inside the vertical bar (11) so as to be able to turn around two small pulleys (2) being mounted at the base structure (10) of the apparatus and of a main large pulley (4) fixed at a diagonal bar (18), and to be finally attached to a first end of an arm member (1) and which the second end is fixed at the base structure (10) of the apparatus.

A spiral spring (6) is connected approximately in middle of the arm member (1) and welded to a rod (7) connected to a part member (8) which may be moved along the perforated body member (3) welded to the base structure

(10) and to be blocked through a hole thereby a metal pin (9) for adjusting the tension of the spring (6).

As illustrated to figs. 9a, 9b, 9c and 9d, there is shown the operation of the mechanical apparatus by a user .

Accordingly, while the preferred embodiments of the invention have been described above, it will be recognized and understood that various modifications may be made in the invention and the appended claims are intended to cover all such modifications which may fall within the spirit and scope of the invention.

CLAIM(S):

The embodiments of the invention in which an exclusive property or privilege is claimed, are defined as follows:

I claim:

1) Claim 1 has been cancelled:

[1: A mechanical apparatus, comprising:

a rigid frame covered with a motionless cushion on which the user can be installed comfortably when he makes different exercises on the ground;

a vertical bar curved at its superior end made up of an adjustable rotary part at different positions is provided with a pulley allowing to a steel wire to pass without friction inside of said pulley anchored into said rotary part turning freely in all directions, which allows to said steel wire to be pulled down in several directions; the bottom end of said vertical bar comprises a part provided with small holes fixed at said frame from the apparatus, allow to change the adjustment of said vertical bar at the desired position in blocking said vertical with a metal pin, wherein said metal pin is inserted into a smalll hole of said part provided with small holes; and a belt allows to join the wrist or the ankle from the user to said steel wire.]

2) Claim 6 has been canceled:

[6: The mechanical apparatus of the claim 1, further comprising a movable part fixed at the perforated frame in semi-circle from the apparatus by a metal pin, and joined to a stem provided with legs welded at a spring fixed at the bar anchored to said frame from the apparatus joining said steel wire passing inside of the main large pulley fixed at the transversal bar joined to said frame from the apparatus.]

3) Claim 7 has been canceled:

[7: The mechanical apparatus of the claim 1, wherein said steel wire fixed at said bar anchored to said frame from the apparatus makes two turns around of said main large pulley fixed at the transversal bar joined to said frame from the apparatus in giving an effect of pulley's arc, and wherein said steel wire passes inside of two small pulleys and of said vertical bar.]

4) Claim 8 has been canceled:

[8. A mechanical apparatus comprising:

a rigid frame covered with a motionless cushion to allow a user to make different exercises on the ground by engaging to a wrist or ankle from the user a belt joined to a steel wire being fixed at one end of a bar and turning two times around of a main large pulley by giving an effect of pulley's arc; said main large pulley is fixed to a transversal bar being joined to said

frame;

said steel wire passes without friction around a first pulley being fixed to said frame and to a second pulley being connected to a part having small holes and being mounted to said frame;

said steel wire passes inside a vertical bar and around of a pulley being mounted to a rotary part turning freely in all directions to allow said steel wire to be pulled down in the desired direction;

said vertical bar is engaged of each side of said first pulley being mounted to said frame and blocked by a metal pin into a small hole being formed with said part for adjusting said vertical bar at the desired position; and

a perforated frame in semi-circle permits by means of a metal pin to adjust the tension of a spring fixed to said bar joined to a side of said frame so as to effect a parallel movement to the floor and to a stem connected to a part being engaged to said perforated frame fixed to said frame.]

5) New claim 9 has been added as follows:

--9. (New) A mechanical apparatus comprising:

a base structure covered with a motionless cushion for supporting the user's body while its wrist or ankle is engaged to a belt attached to a steel cable passing around a small pulley being engaged into an adjustable rotary part

turning freely in all directions and being connected at a curved end of a vertical bar mounted of each side of one small pulley and blocked thereby a metal pin through a hole formed thereon a part member fixed to the base structure of the apparatus for adjusting the vertical bar according to the desired position, and

said steel cable extending inside said vertical bar so as to be able to turn around two small pulleys being mounted at said base structure of the apparatus and of a main large pulley fixed at a diagonal bar, and to be finally attached to a first end of an arm member and which the second end is fixed at said base structure of the apparatus; and

a spiral spring is connected approximately in middle of said arm member and welded to a rod connected to a part member which may be moved along the perforated body member welded to said base structure and to be blocked through a hole thereby a metal pin for adjusting the tension of said spring.--.

ABSTRACT OF THE DISCLOSURE:

~~The present invention is a~~ A mechanical apparatus ~~made up~~ ~~of~~ comprising a ~~rigid frame~~ base structure covered with a motionless cushion ~~on which~~ for supporting the ~~user~~ user's body ~~can be installed comfortably when he makes different exercises on the ground, a vertical bar curved at its superior end provided with an adjustable rotary part at different positions, and a belt allowing to join the wrist or the ankle from the user to a steel wire~~ while its wrist or ankle is engaged to a belt attached to a steel cable which is arranged so as to be pulled in the desired direction for making different exercises on the ground.